Ranger Auto - Drive

Owners Manual

Model No. 5377 – 12HP.

ROVER

WARNING

- A mower is a high speed cutting tool. Safety precautions must be observed to reduce the risk of accident.
- Careless or improper use may cause serious injury.
- Be sure that you read and fully understand the contents of this Owner's Manual. Should any point be unclear, contact Rover-Scott Bonnar Limited, in your State or an authorised Rover-Scott Bonnar Service Agent for assistance.
- Keep the Owner's Manual in a safe place for future reference. Read the Owner's Manual periodically to ensure the continued safe and proper use of the mower.

SAFETY INSTRUCTIONS

- A mower user must be in good physical condition and mental health and not under the influence of any drug or alcohol which might impair vision co-ordination or judgement.
- Do not use a mower when tired or fatigued. Lack of alertness may cause serious injury.
- Know your controls.

Read and understand Owner's Manual before operating mower. Learn how to stop the mower in an emergency. Refer Operator's Instructions.

- Do not lend or sell the mower without the Owner's Manual.
- Be sure that anyone using the mower reads and fully understands the information contained in this Manual and knows how to safely operate the mower.
- Do not allow children or people unfamiliar with these instructions to use the mower.
- Never mow whilst bystanders or pets are present in the mowing area.
- Never carry passengers.
- Never mow while barefoot or wearing open sandals or thongs. Wear long trousers and heavy non-slip shoes.
- It is advisable to wear suitable eye protection when operating a mower.
- Before using, always visually inspect to see that the blades, blade bolts, and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.
- Damaged blades and worn bolts are major hazards.
- Replace worn or faulty silencers.
- Always mount and dismount mower from left-hand side (opposite side to discharge chute).
- Make sure the area to be mowed is cleared of sticks, stones, bones, wire and debris. They could be thrown by the blades.
- Store fuel in a cool place in a container specifically designed for that purpose. In general, plastic containers are unsuitable. Handle fuel carefully. It is highly flammable.
- Refuel outdoors only. Do not smoke when refueling engine. Add fuel before starting engine. Never remove the cap from the fuel tank or add petrol while the engine is running. Allow engine to cool for several minutes before refueling if engine is hot. If petrol is spilled, do not attempt to start the engine, but move the mower away from the area of the spill and avoid creating any source of ignition until the petrol vapors have dissipated.
- Remove the fuel cap slowly to relieve fuel tank pressure.
- Check for fuel leaks while refueling or using the mower. If a fuel leak is found, do not start or run the engine until the leak is fixed and spilled fuel is wiped away.
- Take care not to get fuel on your clothing. If this occurs, change your clothing immediately.
- Do not operate mower in confined space where exhaust fumes (carbon monoxide) can collect.
- Mow only in good daylight.
- Start the engine carefully with feet well away from the blades.
- When starting do not wrap the started rope around your hand. Do not allow the started cord to snap back. Return the starter grip slowly to allow the cord to rewind properly.
- Strictly follow the operator instructions before attempting to start the machine.
- Never mow where machine could tip or slip.
- If machine stalls going uphill, stop blades and back slowly down.
- Mow up and down slopes. Never mow across a slope. Exercise extreme caution when changing direction on slopes. Do not mow excessively steep slopes.
- Do not accelerate or stop the mower suddenly when on a slope.
- Be extremely careful when using a mower on slopes. Stay alert for holes in the terrain and other hidden hazards.
- Disengage cutter drive before mowing across gravel drives, walks or roads.
- Do not mow in reverse. When reversing keep a careful and continuous observation of the entire area behind the mower.
- Never use the mower unless all guards provided by Rover-Scott Bonnar Limited are in position.
- Never disconnect the safety switches and never operate the mower if any safety switch is inoperative.
- Never over-speed the engine or alter the governor settings. Excessive speed is dangerous and shortens mower life.
- Take all precautions when leaving the mower unattended. Disengage the cutter drive, set the park brake, shift into neutral, stop the engine, and remove the key.
- Stop the engine and remove the key whenever you leave the mower, even for a moment.
- Stop the engine and disconnect the spark plug lead and inspect mower if:
  a) The mower begins to vibrate abnormally: or
  b) After striking a foreign object.

  Repair the damage before continuing further operation of the mower.
- Stop the engine and disconnect the spark plug lead before clearing blockages, checking or working on the mower.
- Never pick up or carry a mower while it is operating.
- Where fitted, turn fuel tap off at the conclusion of mowing.
- When transporting in a vehicle, secure the mower to prevent movement, roll-over, fuel spillage, and mower damage.
- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Never modify the mower in any way. Use only replacement parts made and guaranteed by Rover-Scott Bonnar Limited.
- Keep all safety devices (guards and switches) in place and working.
- Keep the engine free of grass, leaves or excessive grease – these can be a fire hazard.
- Store the mower in a well ventilated room away from naked flames such as may be found in hot water heaters.

SAFETY FEATURES

— Traction drive, blade drive and seat safety interlock

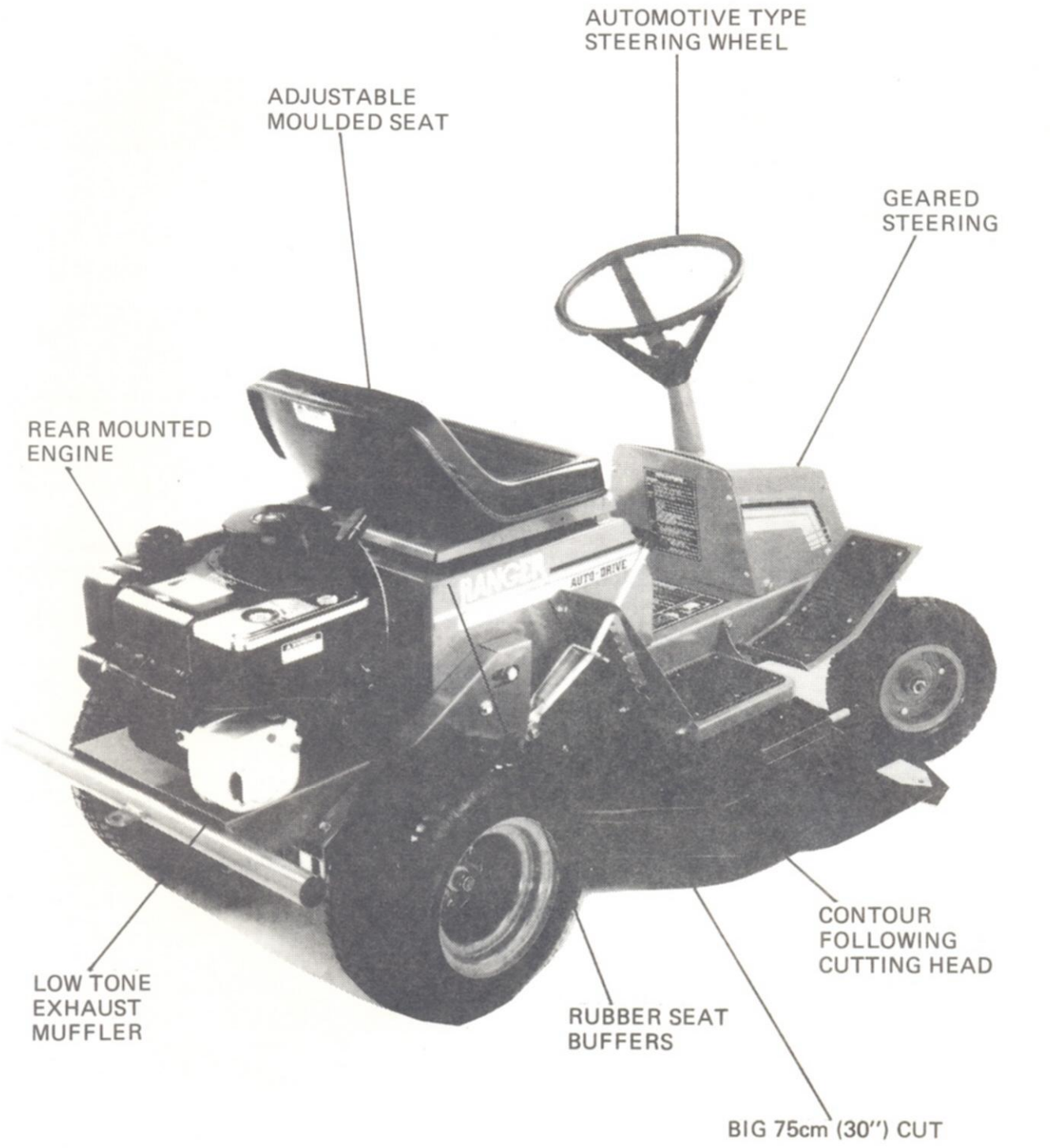
— Enclosed drives

— Full footrests

— Low centre of gravity, stable wide track

— Parking brake

— Convenient – easy to operate controls



SPECIFICATIONS

ROVER RANGER

Machine Model No.	5377
Engine Model No.	281707
Single Cylinder	Briggs & Stratton
4 Stroke	12Hp 465cc
Fuel Capacity	4.0 Litres
Oil Capacity	1.42 Litres
Lubrication	Gear Impellor
Spark Plug type	Champion CJ8
Spark Plug gap	0.7 to 0.8mm
Ignition type	Magnetron
Engine Oil	10w-30 or SAE 30

TRANSMISSION

Auto-Drive system consists of a continuous belt being driven by an idler pulley over two drive pulleys and around a return pulley. Friction plates are brought into contact with the drive pulleys to impart either forward or reverse motion to rear drive wheels by means of a drive selector pedal on the right side of the machine.

Ground speed at 3600 rpm is variable due to Auto – Drive system depending on pressure applied to drive selector pedal.

Max. speed = 8.6 km/hr

CUTTING HEAD

Model 160 Full floating pressed steel housing with right side discharge. Width of cut 760 mm (30”).

TYRES

Front Tyres: 4.1 x 6 Tube
Pressure 140 KPA maximum

Rear Tyres: 16 x 6.5 x 8 Tubeless
Pressure 96 KPA maximum

CONTROLS

* Throttle control with Fast, Slow and Choke positions;
* Key switch with Off, On and Start positions;

To emphasise special information the words WARNING and CAUTION are used.

WARNING: The safety of the user and others involved.
Personal injury may result should this information be disregarded.

CAUTION: Follow these instructions carefully to avoid mower damage and loss of warranty.

STEERING WHEEL

325MM Dia. Steering Wheel. 1 ¼ turns lock to lock.

CLUTCH/BRAKE PEDAL

Foot operated pedal. Left side of machine.

PARKING BRAKE KNOB

Hand operated catch. Left hand side. Used in conjunction with clutch/brake pedal.

DRIVE SELECTOR

Foot operated pedal located on right side of machine. Spring loaded so as to return to neutral position.

CUTTING HEIGHT

Lever right hand side. 8 height of cut positions from 15mm to 65mm.

CUTTER DRIVE

Lever located left side of seat cowl.

GENERAL

Wheel Base: 135cm		Length:	164cm
Track 63cm. R 69cm F		Width:	80cm
Turning Circle: 5.8m		Height:	95cm
Turning Radius: 2.0m		Weight:	195kg

LOOSE PARTS KIT

DESCRIPTION	QTY	USE
Steering wheel	1	On steering shaft
Roll Pin	1	Secure steering wheel to shaft
Stone Guard Assy.	1	Fitted to cutter head
Spring Stone Guard	1	On stone guard pivot rod
'E' Clip	1	In groove in pivot rod
Ignition Keys	1	To start machine
Plug Spanner	1	

SETTING UP INSTRUCTIONS

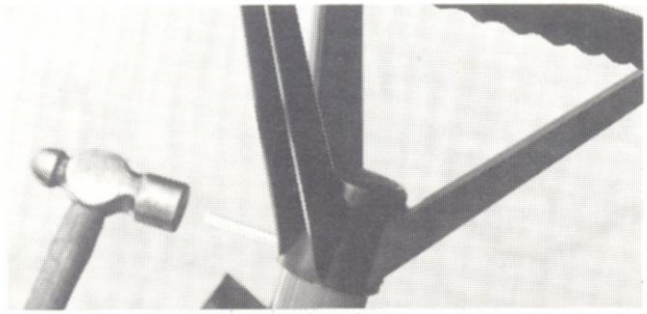


Fig. 2

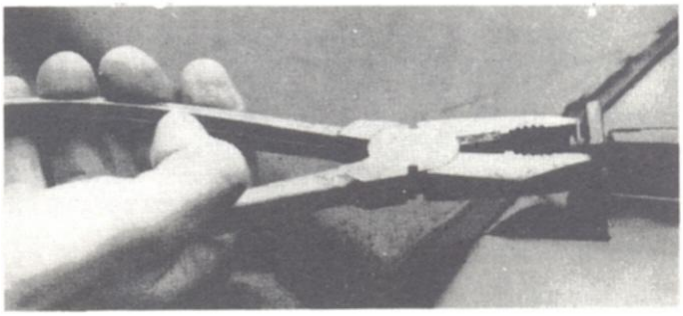


Fig. 4

INSTALL STEERING WHEEL

1. Slip steering wheel over steering shaft and align the wheel hole with the shaft hole;
2. Insert drift punch – partially through the holes to maintain alignment and insert roll pin in the opposite side; See Fig.2.
3. Drive roll pin in until flush with the outside of wheel.

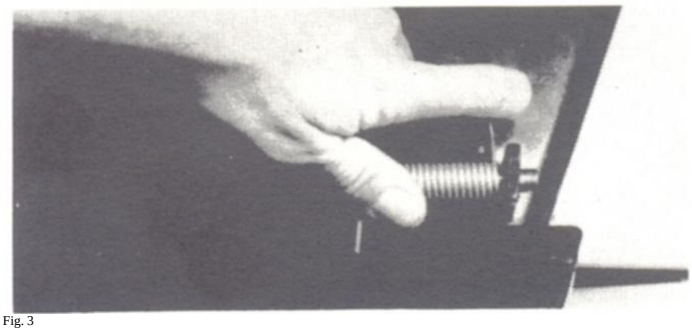


Fig. 3

FIT STONE GUARD

1. Slip spring into stone guard pivot rod so that the short leg rests on top of the stone guard;
2. Now twist the spring as shown and feed the end of the pivot rod into the forward pivot bracket: See Fig.3.
3. Insert the short end of the pivot rod fully into the rearward pivot bracket;
4. Release the spring. It should spring down onto the top of the cutter head and be tensioning the stone guard down;
5. Secure by clipping an 'E' Clip into the groove on the pivot rod. See Fig. 4.

INSTALLING THE BATTERY

BATTERY

1. Remove Battery as follows;
   (a). remove terminal cable from battery;
   (b). undo wingnuts and remove clamp bar.
2. The battery is not filled with Electrolyte. This should be done by adding 33% strength battery acid to each cell until plates are covered. Electrolyte must be purchased from a local battery supply outlet.

IMPORTANT: DO NOT OVERFILL BATTERY. ACID WILL OVERFLOW INTO OTHER PARTS OF THE MACHINE AND SEVERE CORROSION AND DETERIORATION WILL RESULT.

3. Leave filler caps off and connect battery charger to battery terminal. Charge at the rate indicated in the instructions supplied with the battery.
4. After charging, check that Electrolyte is still covering plates, if not, add to correct level. Install filler caps.
5. Replace battery and secure.
6. Install the positive (red) cable to the positive (+) terminal and the negative (black) cable to the negative (-) terminal.
   Secure for good electrical contact.

BEFORE OPERATING

FILL CRANKCASE WITH OIL

The rider mower may be delivered without oil in the crankcase. Oil must be added before attempting to start the engine.

1. Place machine on level surface. Ensure that the oil plug is securely tightened. Clean around dipstick.

2. Unscrew and remove dipstick from oil filler tube.

3. Insert funnel into filler tube and slowly add oil in accordance with the engine manufacturer's direction.

NOTE: Avoid premature engine failure by ensuring the funnel is clean so contaminants are not introduced into the crankcase. Wipe any oil spills so it will not cause dirt to collect on the engine.

4. Ensure oil level is at the full mark on the dipstick, when screwed completely in. When finished replace dipstick and retighten.

NOTE: See Maintenance Instructions.

FILL FUEL TANK – See Safety Instructions.

Use only regular grade or unleaded petrol.
Do not mix oil with petrol – engine damage may result.

1. Clean around fuel tank cap so foreign matter cannot enter tank when cap is removed.

2. Using a funnel, fill tank with regular grade or unleaded petrol. Replace cap.

3. Wipe up any petrol that may have spilled.

CHECK TYRE PRESSURE

Check and maintain tyre pressure at 140KPA (20 PSI) front and 96KPA (14 PSI) rear maximum.

ADJUSTING THE SEAT

Tip the seat forward, loosen the seat securing screws. Relocate the seat for operator comfort.
Tighten the seat securing screws and lowers the seat See Fig.5

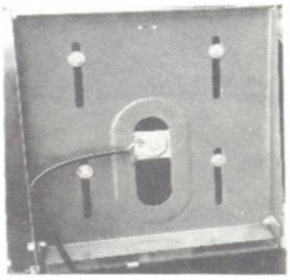


Fig. 5

CONTROLS

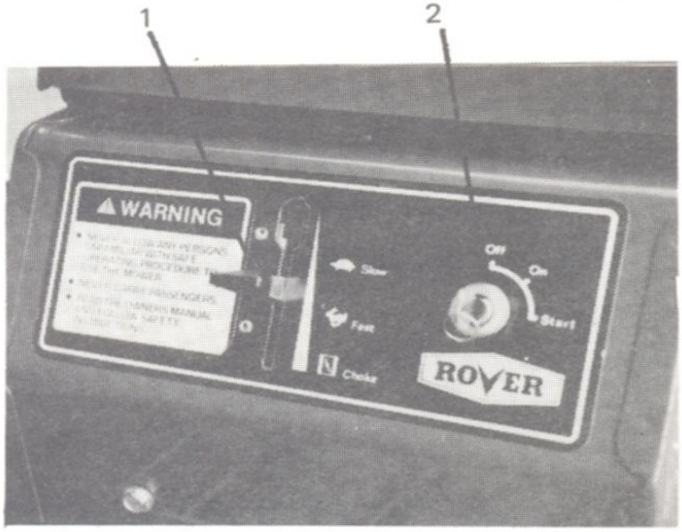


Fig. 6

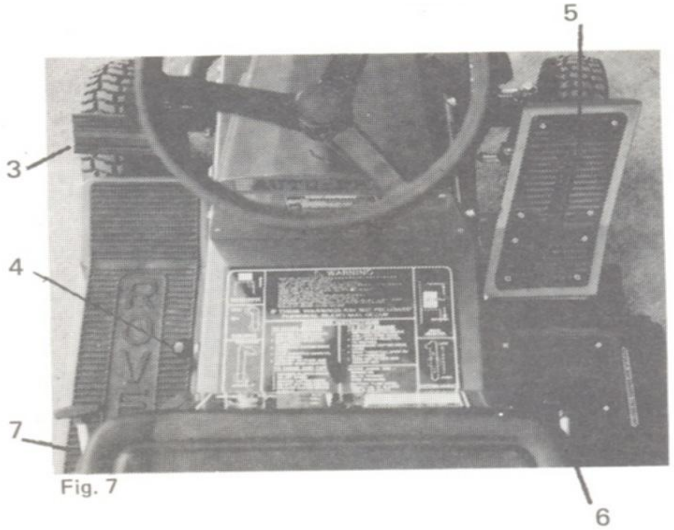


Fig. 7

1. Throttle Control – Mounted on the control panel and connected to the engine carburetor controls. Has the symbols for Slow, Fast and Choke.
2. Ignition Switch – This switch is part of the battery ignition system and has three positions marked for Off, On and Start. The switch is key operated and automatically returns to the On position from Start position when released.
3. Brake/Clutch – Foot operated pedal on left side of machine. Depressing the pedal disengages the drive belt and engages Brake Disc.
4. Parking Brake – Hand operated knob left hand side. Depressing the brake clutch foot pedal enables this knob to be engaged and disengaged. Brake is locked on with knob in up position.
5. Drive Selection – Foot operated right hand side. Depress with toe pressure gives forward motion; depress with heel gives reverse motion. Automatically returns to neutral position.
6. Cutting Height Adjuster – Located on right of seat with low cut at bottom and high cut at the top setting.
7. Cutter Drive – Lever located on left hand side of seat mounting box. Down position disengages blade drive and applies blade brake, Up position engages blades.

OPERATING INSTRUCTIONS

AUTO – DRIVE OPERATION

Forward and backward movement of the mower is controlled by the drive selector pedal. As with a motor vehicle, speed is controlled by the amount of pressure on the drive selector pedal. Ensure that the mower user is familiar with this means of operation before operating the mower, particularly in tight or confined areas.

TO START ENGINE

NOTE: The engine will not start unless the cutter drive is disengaged, and clutch/brake pedal is depressed.

1. Depress clutch/brake pedal – Apply the parking brake
2. Move the drive selector to neutral
3. Disengage the cutter drive
4. Move the throttle lever to the choke position
5. Turn the ignition key to the start position and release when the engine starts
6. Move the throttle lever to about ¼ position

TO MOW OR DRIVE

1. Depress clutch/brake pedal
2. Disengage the parking brake
3. Select height of cut
4. Move throttle to about ¾ position
5. Engage cutter drive
6. Select desired drive
7. Slowly release clutch/brake pedal to move off

TO STOP ENGINE

1. Depress clutch/brake pedal
2. Shift the drive selector to neutral
3. Disengage the cutter drive
4. Apply the parking brake
5. Move throttle lever to the slow position
6. Turn the ignition key to OFF. Remove the keys

TO STOP IN AN EMERGENCY

1. Depress brake/clutch pedal and drive selector pedal together. (This disengages power from the engine and engages the disc brake)
2. Apply park brake and lock
3. Move throttle to slow position and switch off ignition key
4. Dismount from mower if it is safe to do so

IMPORTANT

1. The parking brake should always be applied before leaving the machine
2. The parking brake must be released before attempting to drive
3. Depress the clutch/brake pedal-when starting or coming to rest
4. Do not use sudden directional reversal which can cause wheel spinning

ENGAGING CLUTCHES

When engaging the cutter drive lever or releasing the clutch/brake pedal, always operate slowly. Do not use a jerking motion. Moving these controls too fast could possibly overload and stall the engine.

WARNING: To avoid loss of control always come to a complete stop before changing drive direction and slow down before turning.

REMEMBER

1. Always look behind the machine before reversing
2. Do not refuel when the engine is running or while the engine is hot
3. Keep bystanders away – Keep hands and feet clear of moving parts
4. Keep machine clean of grass and debris
5. Keep all safety devices (guards and switches) in place and working

Periodically check the machine and the cutting mechanism. If parts are worn or need replacing do so by using only Genuine Rover Replacement Parts.

There is a comprehensive Ranger Spare Parts List contained in this book to help you select the right part quickly.

Before working on the mower, disconnect the spark plug lead from the spark plug and place it where it cannot contact the spark plug.

Check your Rover Ranger frequently for loose nuts, bolts, belts etc, and keep these items correctly tightened and adjusted.

Note: A check after the first two hours of operation is recommended. Engine failure or rapid engine wear mainly result from the following causes –

1. Dirt or abrasives entering the engine via the air cleaner due to –
   a. The air cleaner element not being serviced regularly, or
   b. The air cleaner damaged or dislodged
2. Dirt or abrasives entering the engine via the oil filler tube due to –
   a. Using a funnel not cleaned of dirt and grit,
   b. Topping up with contaminated oil. Oil stored in an unclean container
3. Lack of oil. It is important to –
   a. Check the oil level regularly (every 5 hours of operation)
   b. Maintain a full sump

MAINTENANCE INTERVAL CHART

	See Page	5 Hours	25 Hours	PERIODIC SERVICE EVERY 25 HRS 50	75	100	125	150	175	200
Change Oil (Initial)	6	X								
Change Oil (Periodic)	6		X							
Check Interlock	11	X	X							
Check Cutting Blades	-	X	X							
Check Cutting Unit Brake	9		X							
Check Rear Wheels Brake	9		X							
Lubricate Pivot Points	7		X							
Lubricate Drive Chain	7		X							
Lubricate Throttle Cable	7		X							
Grease Front Axle Spindles	7		X							
Service Air Cleaner	6		X							
Check Spark Plug	6		X							
Check Drive Belts	10		X							
Check Drive Chain	10		X							
Check Tyre Pressure	4		X							
Clean Outside of Engine	-		X							
Clean Cutter Housing	-		X							
Paint Chipped Surfaces	-		X							

AIR CLEANER: Dual Element Type –

1. Remove two cover knobs and remove air cleaner cover.
2. Remove foam pre-cleaner, if so equipped
   a. Wash pre-cleaner in liquid detergent and warm water to remove dirt
   b. Wrap pre-cleaner in cloth and squeeze dry
   c. Saturate foam in engine oil. Squeeze to remove excess oil.
3. Remove two nuts from top of cartridge.
4. Remove cartridge and clean air cleaner body carefully to prevent dirt from entering carburetor. Brush dirt from lower air cleaner body into duct.
5. Clean cartridge by gently tapping on flat surface
   a. If very dirty, replace cartridge or wash in a low or nonsudsing detergent and warm water solution
   b. Rinse thoroughly from INSIDE OUT until water is clear
   c. Cartridge must be allowed to stand and air dry thoroughly before using.
6. Reassemble air cleaner.

NOTE: Nuts holding air cleaner cartridge must be installed with fiber washers down on cartridge plate to prevent dirt from entering carburetor. Tighten nuts by hand. Over tightening could collapse cartridge.

NOTE: Petroleum solvents, such as kerosene, are not to be used to clean cartridge. They may cause deterioration of the cartridge. DO NOT OIL CARTIRIDGE. DO NOT USE PRESSURISED AIR TO CLEAN OR DRY CARTRIDGE.

OIL CHANGE

See engine manufacturer's instructions.

1. Place machine on a level surface. Start and run engine for a period to warm the oil.

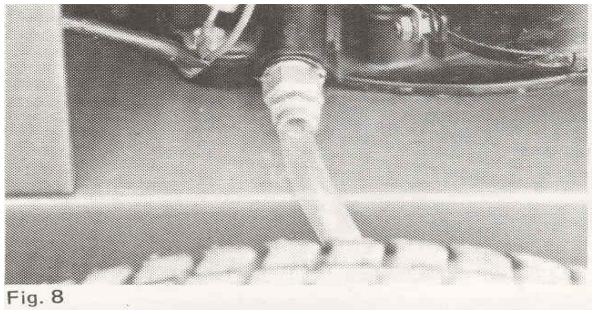


Fig. 8

2. Fit drain tube to drain fitting; see Fig.8.
3. Place an oil pan under the end of drain tube;
4. Open the drain fitting about 1 turn and allow the oil to drain completely;
5. Retighten drain fitting and refill sump with new oil. For correct viscosity and service classification, see the engine manufacturer's instructions.

SPARK PLUG

The spark plug gap gradually increases during engine running and should be checked periodically and whenever the engine malfunctions.

1. Clean around spark plug area so that dirt will not enter engine when plug is removed
2. Disconnect spark plug lead and remove spark plug
3. Check condition of electrodes and ensure there is no damage to insulator
4. Carefully clean the spark plug. Do not grit blast
5. Set the gap to .8mm (.30")
6. Install plug in engine and tighten to 20Nm. If a torque wrench is not available hand tighten plug. Then with tube spanner tighten plug about 1/12 of 1 turn
7. Refit high tension lead. Push onto plug firmly.

MAINTENANCE

COOLING SYSTEM

The Ranger has an air cooled 4 stroke engine. It must be cleaned frequently. Remove any build-up of grass, dirt or other debris from the -

1. Cylinder;
2. Cylinder head cooling fins;
3. Cooling air intake screen and;
4. Carburetor governor levers and linkages.

This will ensure adequate cooling and correct engine speed.

THROTTLE CONTROL

Proper choke and stop switch operation is dependant on adjustment of remote controls –

1. Loosen outer cable clamp screw (D) on engine; See Fig.9.
2. Set throttle control to choke position;
3. Adjust outer cable under clamp plate so that choke is operated;
4. Tighten clamp plate screw and check –
   a. Choke does not operate in fast position, and
   b. Stop switch operates correctly.

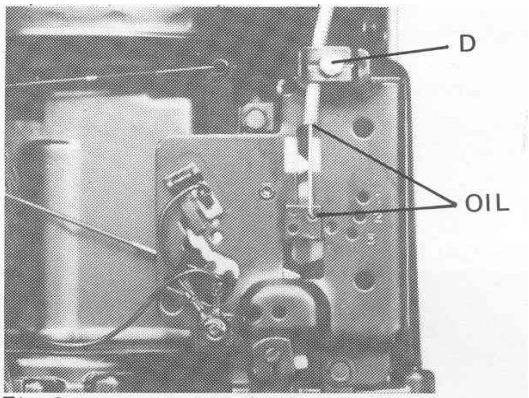


Fig. 9

CARBURETOR ADJUSTMENT

The carburetor has been factory set and should only require occasional fine tuning. See Figs.9 & 10.

1. Close high speed needle valve (A) in bottom of carburetor bowl. Close finger tight in clockwise direction;
2. Open (anti-clockwise) the needle valve 2 turns (that is an approx. setting);
3. Start engine and let it warm up. Approx. 2 minutes. Cutter drive must be disengaged. Speed Select-or must be in Neutral position and Park Brake applied, air cleaner must be fitted and secured and fuel tank must be half full.
4. With the engine running at high speed, adjust the needle valve 1/8 turn at a time. Clockwise or anti-clockwise until engine runs smoothly.

NOTE: Allow several seconds between each adjustment for engine to adapt to the new setting

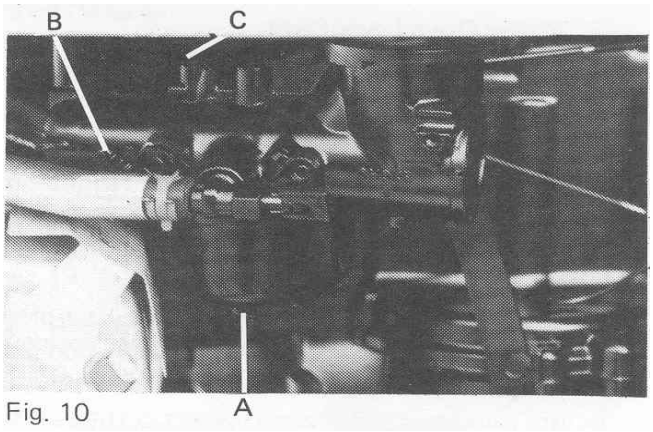


Fig. 10

5. Move throttle to the slow position and adjust the slow running stop screw (B) to give an engine speed of 1700 to 1800 RPM.
6. Adjust the idle needle valve (C) slowly in (lean) and out (rich) until engine idles smoothly.
7. Reset engine idle speed.
8. Check operation. Engine should increase speed without hesitation when throttle control is moved quickly from slow to fast. If the engine tends to die out, adjust the high speed needle valve 1/8 turn anti-clockwise until engine accelerates smoothly.
   Never tamper with the engine governor setting.
   Changing the engine governor speed will void engine warranty.

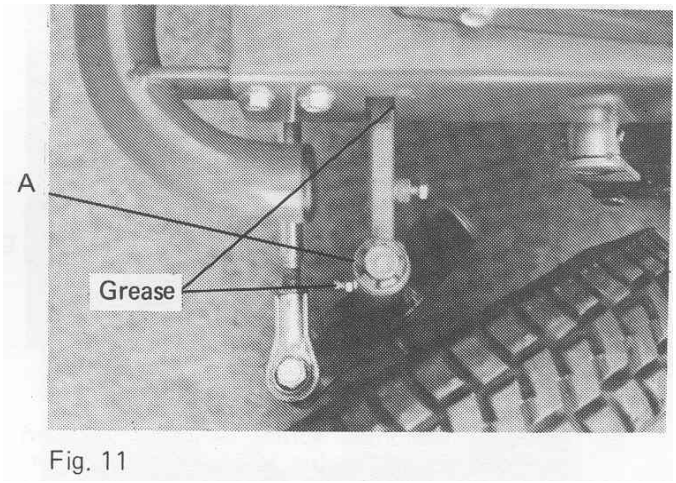


Fig. 11

LUBRICATION GENERAL

Using General Purpose Grease – (Every 25 hours)

- Grease nipples on front wheel pivots. See Fig.11
- Front Axle beam guides
- Grease nipples on steering pivot blocks Fig.21
- Steering gears Fig.21
- Grease nipple on engagement lever pivot Fig.23

Using Clean Engine Oil –

- Jockey pivot arms
- Throttle control cable Fig.9
- Chain Fig.23

MAINTENANCE

- Cutter Drive Lever Pivot;
- Clutch/brake pedal pivot; See Fig.15
- Tie rod ball ends; Fig.11
- All connecting rod pivot points.

NOTE: All ball bearings are sealed and require no maintenance.

CUTTING UNIT:

Remove spark plug lead and disengage cutter drive before working on cutter unit, to prevent accidental starting of the engine.

Before using machine always inspect cutting unit to see that the cutting disc, blades and blade fixings are not worn or damaged.

Always check after striking a solid object. Do not operate machine when unusual vibration occurs.

Replace worn or damaged blades in sets to preserve balance. Remove any build-up of grass or clogging within the cutting unit or discharge chute or safety flap.

CUTTING UNIT REMOVAL

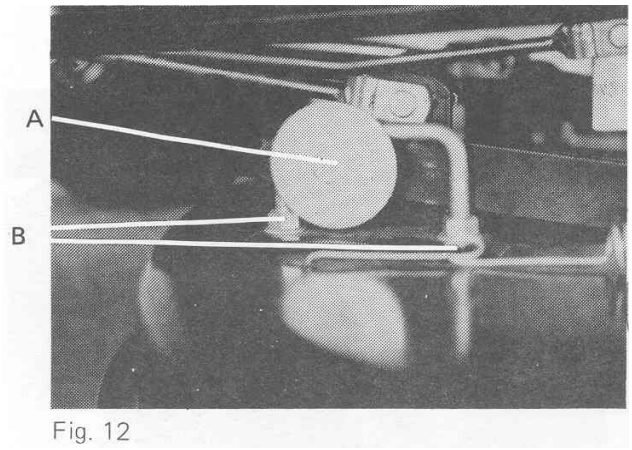


Fig. 12

1. Disconnect Push Rods & Brake Rod Fig.12
2. Remove tensioning spring. A loop has been provided on the spring to assist in this operation; See Fig.12
3. Slide cutterdeck towards back of machine and remove belt from around cutterdeck pulley.
4. Undo large retaining washer bolts (A) Fig.12. This will allow front of deck to be lowered to ground.
5. Slide cutterdeck forward. This will allow the rear of the deck to be lowered to the ground and be slid from under the machine.
6. Replace in reverse order.

NOTE: To remove cutterdeck belt from machine, the belt guard Item 52, Page 20, has to be moved away from the drive pulley to allow the belt to be removed from the V-groove and the cutterhead lifting rod Item 15, Page 16, is to be disengaged from the cutterhead selection arm assembly Item 5, Page 16 to allow belt to be drawn out.

WHEEL REMOVAL

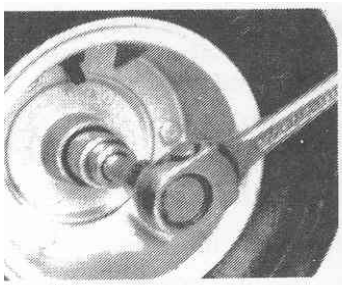


Fig. 13

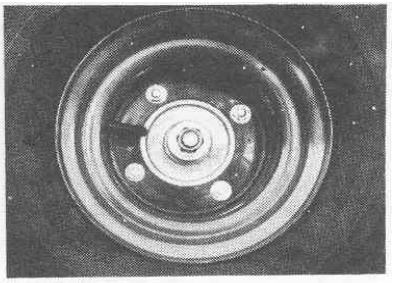


Fig. 14

CAUTION: Always deflate tyre before removing rim nuts on front wheel only.

Front –

1. Chock wheels and remove axle nut; See Fig.13
2. Raise front of machine;
3. Slide wheel from shaft;
4. Replace in reverse order;
5. Retighten axle nut firmly.

Rear –

1. Chock front wheels and raise rear of machine;
2. Remove four wheel nuts;
3. Slide wheel from hub; Fig.14
4. Refit wheel to hub
5. Replace wheel nuts and tighten.

BRAKE CALIPER ADJUSTMENT

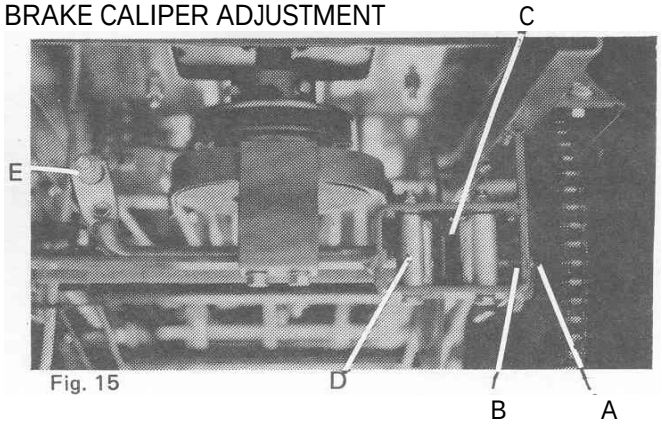


Fig. 15

1. Loosen locknut 'A' Fig.15
2. Loosen Bolt 'B' till brake caliper 'C' touches brake Disc.
3. Retighten Locknut 'A'

BRAKE ARM ADJUSTMENT

1. Check that brake caliper is correctly adjusted;
2. Adjust locknut 'E' Fig.15. Till brake arm 'D' pad comes into contact with disc;
3. Check operation of brake to ensure park brake can be applied, and brake operates correctly.

MAINTENANCE

PARKING BRAKE

Should always be checked for operation after clutch/brake rods have been adjusted.

CUTTER DRIVE ADJUSTMENT

1. Move Cutter Height Selector Lever to No.4 Position in Rack
2. Move Cutter Drive Lever to the Engaged Position
3. Adjust Push Rods Fig.16 to give a spring compression of 30mm, Fig.17.

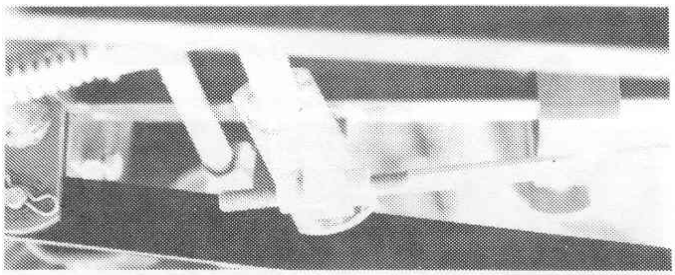


Fig. 16

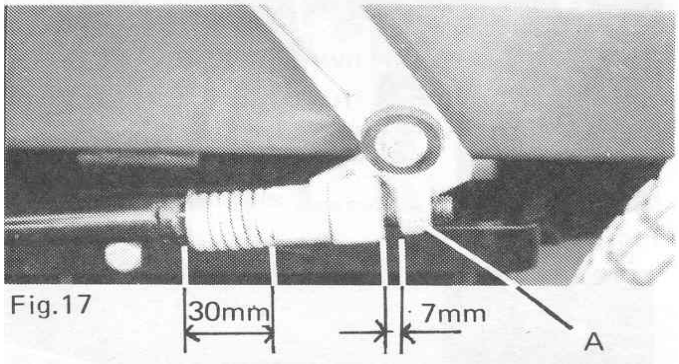


Fig.17

4. Adjust Locknut 'A' to give 7mm clearance to back of swivel block Fig.17
5. Disengage the Cutter Drive Selector Lever
6. Adjust locknut 'A' in Fig.20 to give Cutter Engagement Lever a free travel of 30mm from bottom of slot in Fig.18.

NOTE IMPORTANT

Check to ensure Lever has 30mm of free travel by working lever.

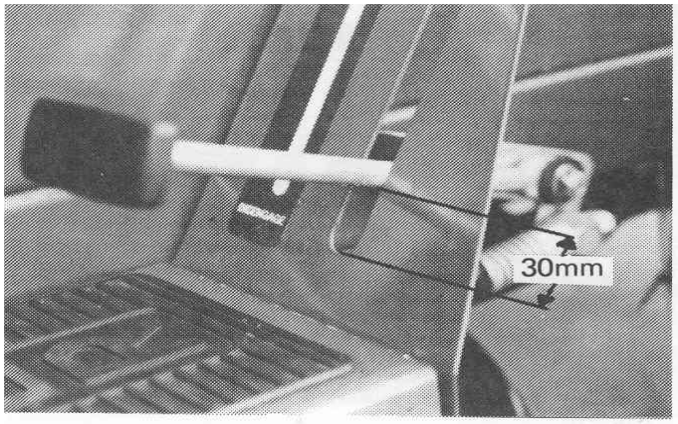


Fig. 18

CUTTER HEAD BRAKE

Should regularly be checked for operation.

PAD REPLACEMENT

1. Remove 'R' clip and push rod pin (See Fig.19)
2. Remove brake pivot bolt (B) and two spacers (See Fig.19)
3. Remove brake plate assembly
4. Drill out pad retaining rivets
5. Rivet replacement pad in position
6. Refit in reverse order.

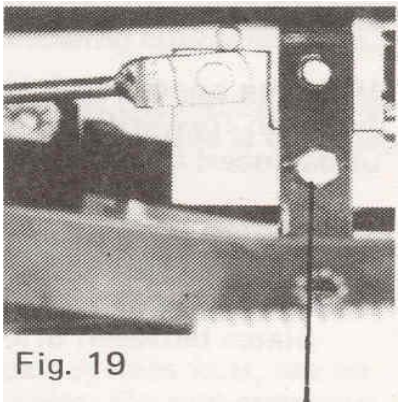


Fig. 19

B

CUTTERHEAD BRAKE ADJUSTMENT

1. With cutter head disengaged and in low cut position
2. Adjust nyloc nut on rod as per step 6 for Cutter Driver Adjustment
3. Adjust tension on spring using lock nuts to give length of 58mm, Fig.20

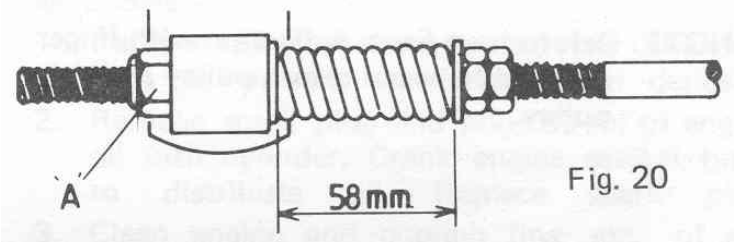


Fig. 20

STEERING GEARS

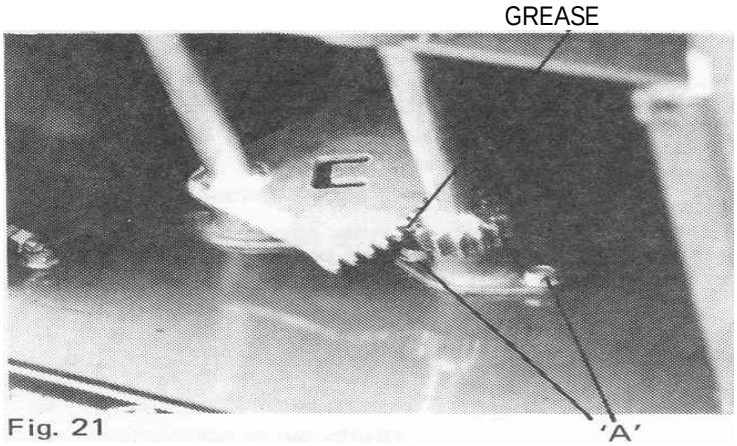


Fig. 21

To adjust out excessive play caused by wear in the gears.

1. Loosen bolts securing steering shaft pivot block (A).
2. Lightly tap pivot block towards layshaft pivot block and retighten bolts (A).
3. Check steering gear engagement. Check that there are no tight spots when turning steering wheel from lock to lock.

MAINTENANCE

AUTO DRIVE

The Auto-Drive friction plates and drive pulleys are factory set for travel required along key shaft and this should not need adjusting.
If during operation it is found that the relationship between forward and reverse has become unbalanced adjust as follows:-

1. Loosen locknut (A) Fig.22
2. Centralise engagement lever (D) with friction plates between drive pulleys, Fig.23
3. Re-tighen locknuts (A), Fig.22

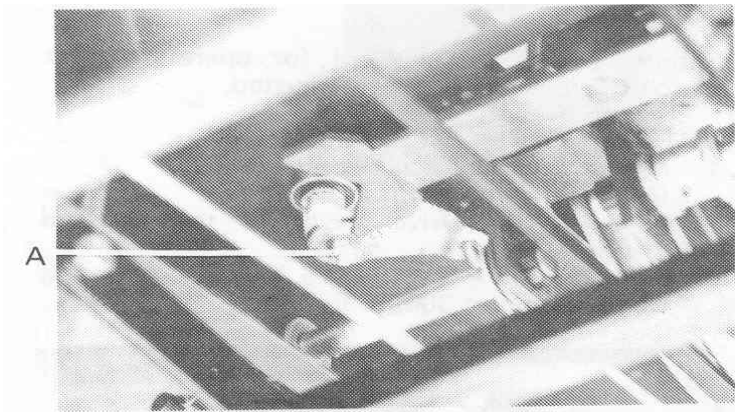


Fig. 22

CONTINUOUS BELT
This can be adjusted as follows:-

1. Loosen locknut (A) Fig.23
2. Loosen pivot bolt (B) Fig.23
3. Adjust belt tension using bolt (C) Fig.23
4. Re-tighten locknut (A) and pivot bolt (B)

NOTE: Belt to have 5mm deflection with finger pressure between return pulley and drive pulley.

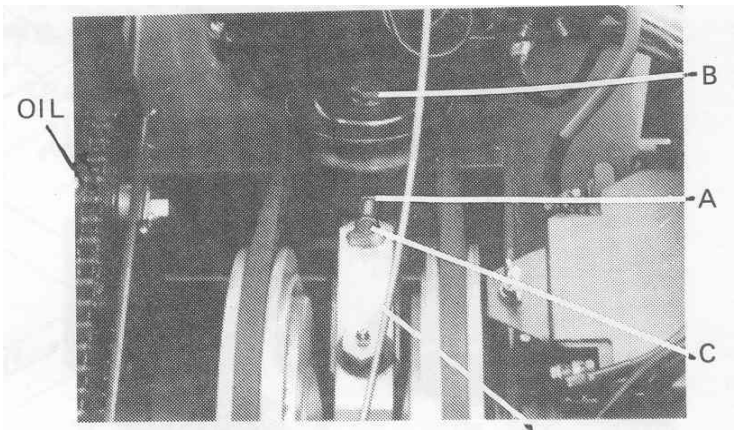


Fig. 23

DRIVE CHAIN ADJUSTMENTS
Primary
1. Loosen off bolt 'A' Fig.24
2. Slide idler back till chain tightens
3. Re-tighten bolt 'A' and check chain for tight spots

Secondary
1. Loosen off bolt 'B' Fig.24
2. Slide sprocket back till chain tightens
3. Re-tighten bolt 'B' and check chain for tight spots

CAUTION: Do not over-tension belts or drive chains.

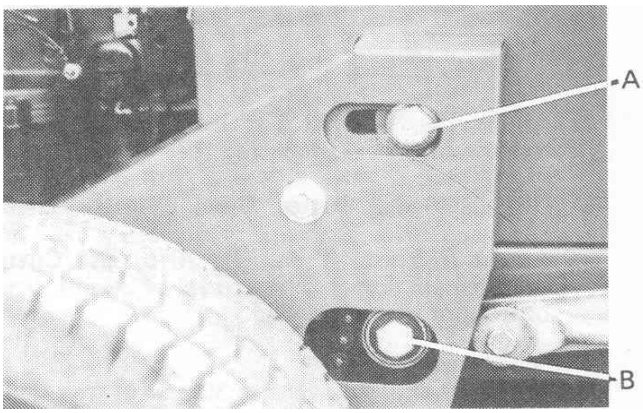


Fig. 24

DRIVE SELECTOR PEDAL
The pedal angle can be tilted either forward on back to suit individual requirements if necessary.

1. Loosen locknuts (A) on control rod Fig.25
2. Tilt control pedal to required angle to give maximum operator comfort.
3. Retighten locknuts

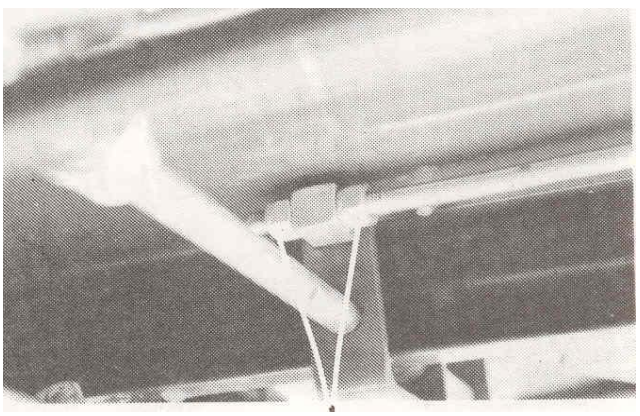


Fig. 25

MAINTENANCE

STEERING RODS

Should not normally require resetting.

1. Loosen rod lock nut; (A) See Fig.11
2. Release the fixing bolt;
3. Turn tie rod end to adjust for length clockwise to shorten, anti-clockwise to lengthen
4. Replace the fixing bolt and tighten;
5. Tighten rod lock nut;
6. Make sure rod is free to pivot.

CUTTER HEAD TILT

This will not normally require resetting.

1. Loosen U-Bracket nuts; (B) See Fig.12.
2. Adjust nuts up or down to set tilt;
3. Model 160 (760mm cut) does require back of blade circle tilted 15mm above front of blade circle in low cut position;
4. Retighten all nuts.

STEERING STOPS

These will not normally require resetting.

1 Check if steering segment gear rotates in both directions.

2 Loosen locknut on front beam and adjust bolt till number of turns in both directions is equal.

3 Retighten locknut.

HEIGHT OF CUT ADJUSTMENT

To adjust the height of cut rotate the nyloc nut (A) situated under the centre of machine on the rear cutter support assembly.
Adjust nyloc nut to obtain low cut at front of blade circle of 15mm.

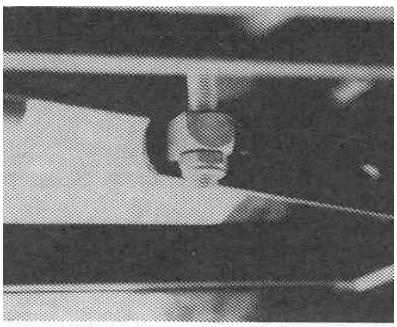


Fig. 26

SAFETY INTERLOCK SYSTEM

The safety interlock system has been designed for your protection and should not be tampered with. It gives the Ranger the following characteristics.

The engine will not start unless the clutch/brake pedal is depressed and the cutter drive is disengaged.

NOTE: The engine should stop if the operator leaves the seat without engaging park brake and/or the cutter drive engaged.

WARNING: If the interlock system fails, see an authorised dealer. Do no operate until the fault is corrected.

CAUTION: Safety switch circuit may become defective if wet. Do not spray switches and connections.

STORAGE

Never store engine with fuel in tank indoors or in poor ventilated enclosures where fuel fumes may accumulate.

If machine is to be stored over 30 days proceed as follows:-

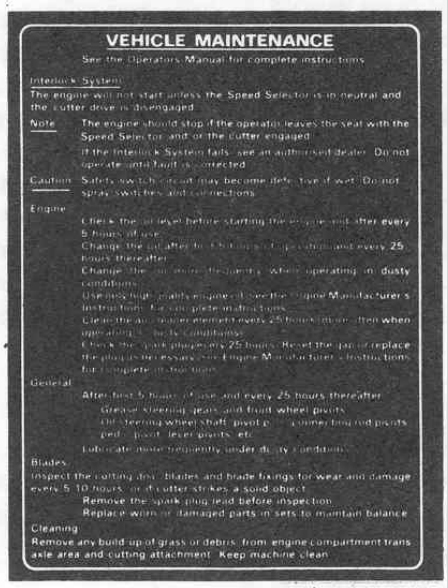
1. Remove all fuel from carburetor and fuel tank to prevent varnish-like gum deposits.
2. Remove spark plug and pour 30ml of engine oil into cylinder. Crank engine several times to distribute oil. Replace spark plug.
3. Clean engine and cooling fins, etc., of any clippings, dirt and chaff.
4. Clean underside of mower and cutting unit. Paint any chips or scratches.
5. Lubricate chassis components.
6. Remove and charge battery and store in a cool dry spot. Recharge every 30 days.
7. Store machine in a clean dry place.

REMOVAL FROM STORAGE

1. Change oil.
2. Fill fuel tank with fuel.
3. Check spark plug.
4. Check drive belts.
5. Check drive chain.
6. Lubricate drive chain.
7. Lubricate pivot points.
8. Grease front axle spindles.
9. Check tyre pressure.
10. Check safety interlock.
11. Check cutting blades.

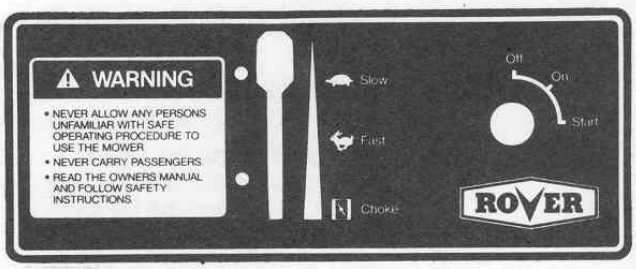
SAFETY AND INSTRUCTION DECALS

Safety and Instruction decals are mounted on the RANGER Rear Engine Rider.
Replace any that become damaged or illegible.

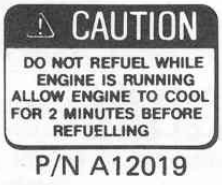


P/N A07785

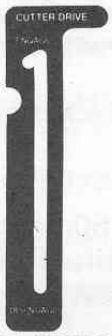
P/N A02571



P/N A12261

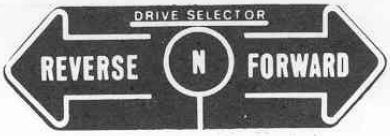


P/N A12019

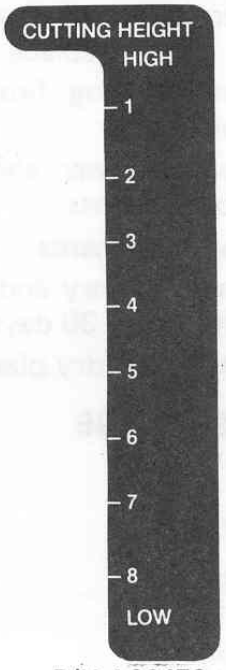


P/N A12253

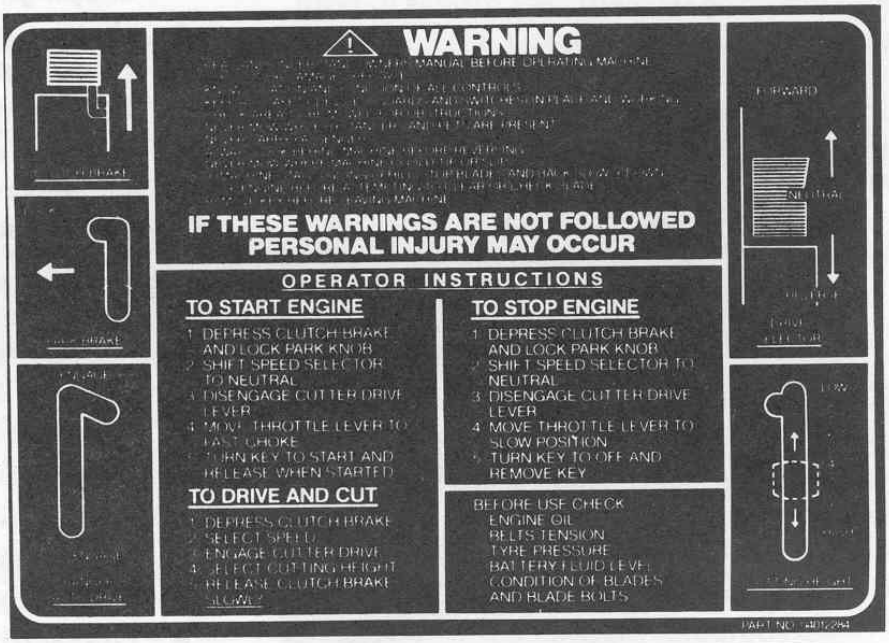
P/N A12106



P/N A05417

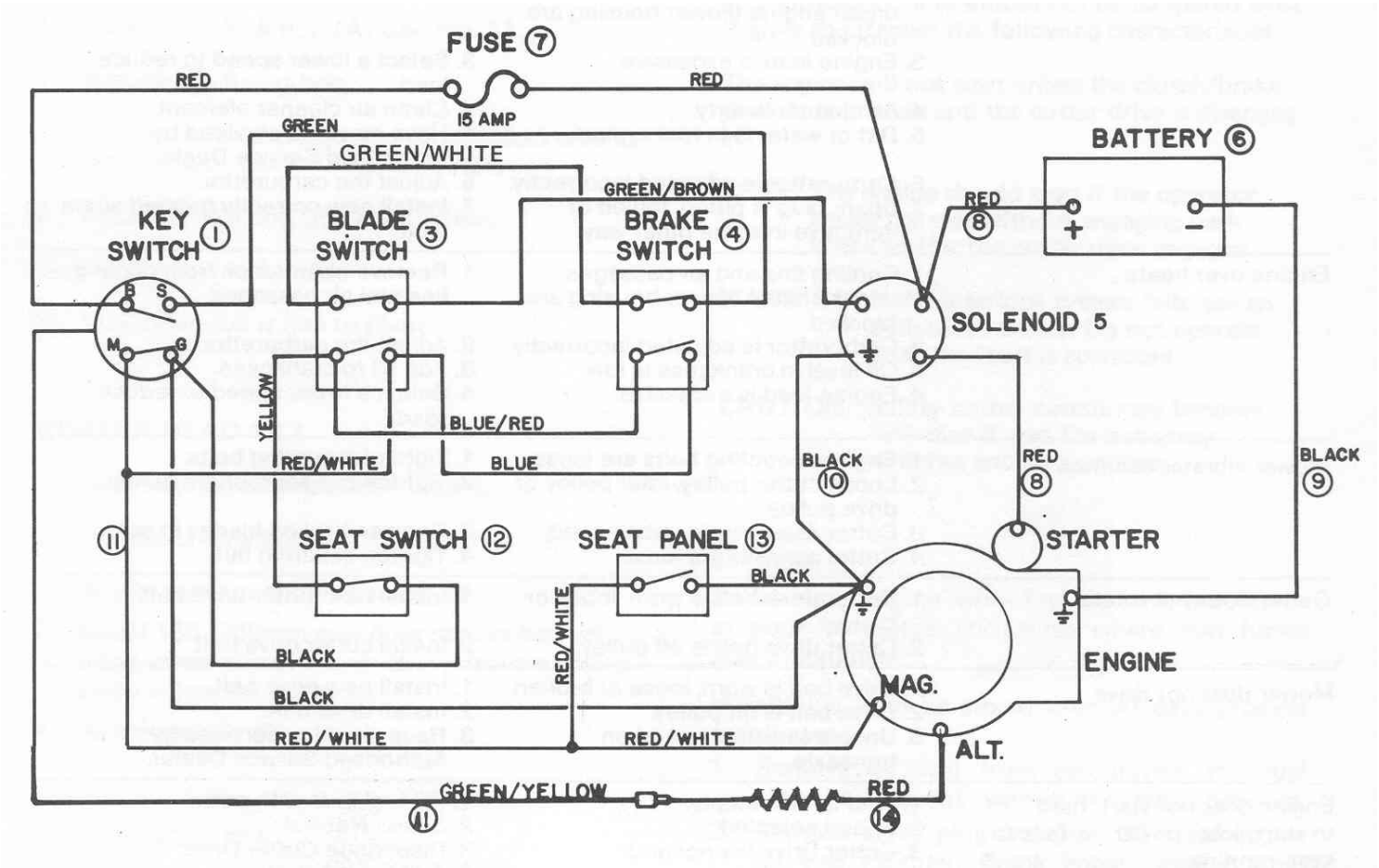


P/N A06479



P/N A12284

CIRCUIT DIAGRAM AND SPARES



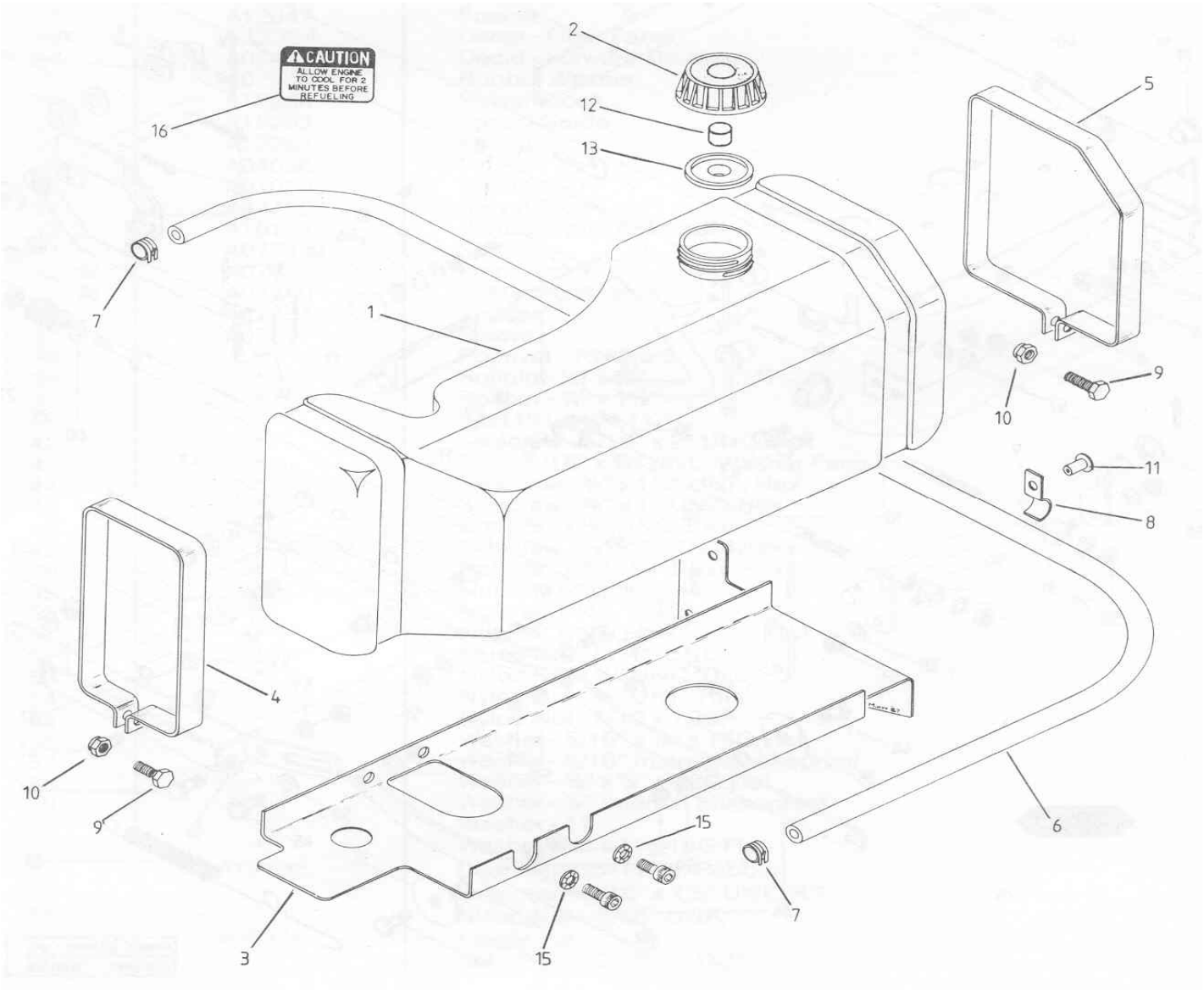
ITEM	DESCRIPTION	PART No.
1	KEY SWITCH	A07678
2	KEY	A07679
3	BLADE SWITCH	A06406
4	BRAKE SWTICH	A06406
5	SOLENOID	A07107
6	BATTERY	A05262
7	FUSE	A07513
8	POWER LEAD	A12277
9	EARTH LEAD	A12278
10	EARTH STRAP	A12020
11	WIRING LOOM	A10274
12	SEAT SWITCH	A10257
13	SEAT PANEL SW.	A06406
14	RESISTANCE LEAD	A12283

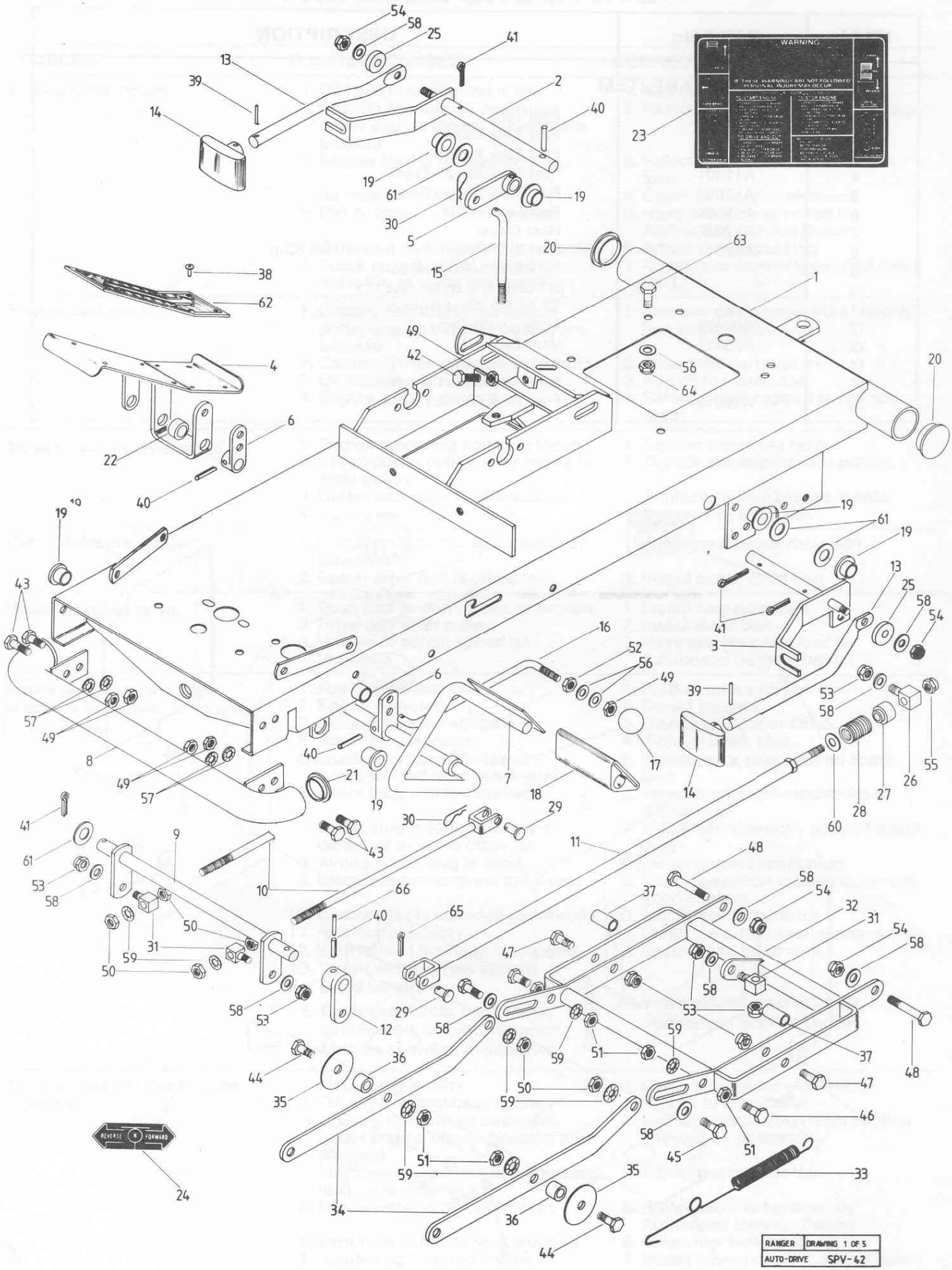
TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
Engine loses power	1. Oil level in crankcase in low	1. Add oil to crankcase
	2. Cooling fins and air passages under engine blower housing are blocked	2. Remove obstruction from passages
	3. Engine load is excessive	3. Select a lower speed to reduce load
	4. Air cleaner is dirty	4. Clean air cleaner element
	5. Dirt or water is in fuel system	5. Have machine serviced by Authorised Service Dealer
	6. Carburetor is adjusted incorrectly	6. Adjust the carburetor
	7. Spark plug is pitted, fouled or defective in some other way	7. Install new correctly gapped spark plug
Engine over heats	1. Cooling fins and air passages under engine blower housing are blocked	1. Remove obstruction from cooling fins air passages
	2. Carburetor is adjusted incorrectly	2. Adjust the carburetor
	3. Oil level in crankcase is low	3. Add oil to crankcase
	4. Engine load is excessive	4. Select a lower speed to reduce load
Mower vibrates abnormally	1. Engine mounting bolts are loose	1. Tighten mounting bolts
	2. Loose cutter pulley, idler pulley or drive pulley	2. Tighten the appropriate pulley
	3. Cutter assembly is unbalanced	3. Replace broken blades in sets
	4. Cutter assembly is loose	4. Tighten securing nut
Cutter does not rotate	1. Cutter drive belt is worn, loose or broken	1. Install new cutter drive belt
	2. Cutter drive belt is off pulley	2. Install drive belt
Mower does not drive	1. Drive belt is worn, loose or broken	1. Install new drive belt
	2. Drive belt is off pulley	2. Install drive belt
	3. Unable to select speed on transaxle	3. Have machine serviced by Authorised Service Dealer
Engine does not start, hard to start, loses power, or fails to keep running	1. Fuel tank is empty	1. Fill fuel tank with petrol
	2. Speed selected	2. Select Neutral
	3. Cutter Drive is engaged	3. Disengage Cutter Drive
	4. Spark plug is loose	4. Tighten spark plug
	5. Spark plug lead is loose or disconnected from spark plug	5. Install spark plug lead on spark plug
	6. Spark plug gap is incorrect	6. Set gap between electrodes at 0.8mm
	7. Spark plug is pitted, fouled, or defective in some other way	7. Install new correctly gapped spark plug
	8. Wrong spark plug is used	8. Install correct spark plug
	9. Electrical connections are loose	9. Check electrical system to ensure good contact
	10. Carburetor is adjusted incorrectly	10. Adjust the carburetor
	11. Air cleaner is dirty	11. Clean the air cleaner element
	12. Vent hole in fuel tank is plugged	12. Inspect and open vent
	13. Dirt or water in fuel system	13. Have machine serviced by Authorised Service Dealer
	14. Dead battery	
	15. Defective points, condenser, ignition coil, or ignition switch	
	16. Module or switch is defective	
Engine does not idle or idles Poorly	1. Air cleaner is dirty	1. Clean air cleaner element
	2. Oil level in crankcase is low	2. Add oil to crankcase
	3. Cooling fins and air passages under engine blower housing are plugged	3. Remove obstruction from cooling fins and air passages
	4. Idle speed is too low or high speed mixture is incorrect	4. Adjust the carburetor
	5. Dirt or water is in fuel system	5. Have machine serviced by Authorised Service Dealer
	6. Vent hole in fuel tank is plugged	6. Clean fuel tank vent
	7. Spark plug is pitted, fouled or defective in some other way	7. Install new correctly gapped spark plug

RANGER AUTO – DRIVE SPARE PARTS LIST

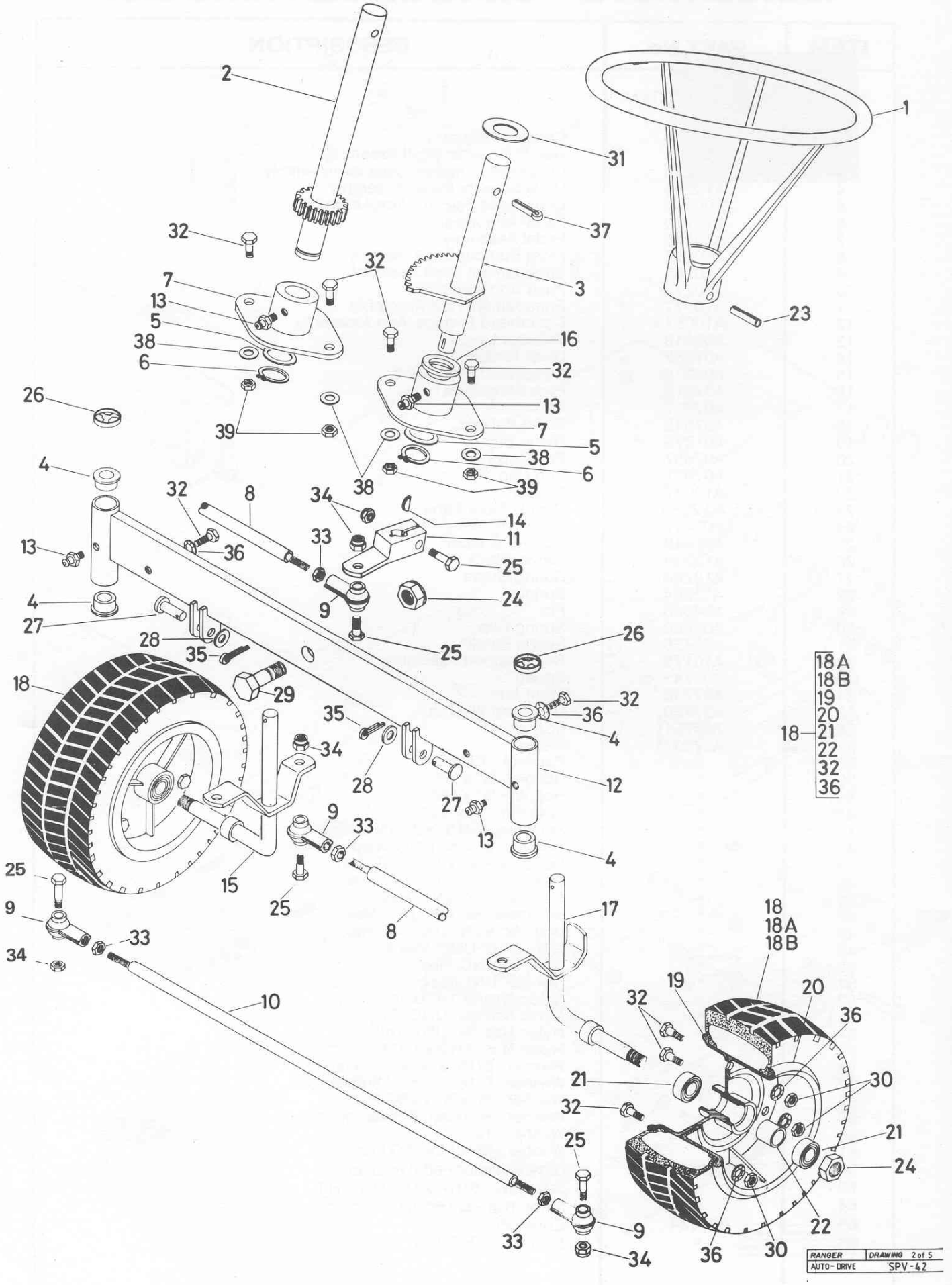
ITEM	PART No.	DESCRIPTION
* COMMON HARDWARE ITEM		
1	A07937	Fuel Tank
2	A12005	Fuel Tank Cap
3	A07999	Fuel Tank Bracket
4	A12001	Fuel Tank Strap – Front
5	A12002	Fuel Tank Strap – Rear
6	A12009	Fuel Line – ¼ ID
7	A12010	Hose Clamp
8	A12011	Fuel Line Retainer ½" Copper Half Clip
9	*	¼" x ⅝" UNC Hex Bolt
10	*	¼" UNC Std. Nyloc Nut
11	*	73 AS 5-5 Blind Rivet
12	A03422	Filter – Cent Cap
13	A03421	Vent Cap
14		
15	*	5/16" Shakeproof Washer
16	A12019	Fuel Tank Caution Label




WARNING
IF THESE WARNINGS ARE NOT FOLLOWED PERSONAL INJURY MAY OCCUR
REVERSE
N
FORWARD
RANGER
DRAWING 1 OF 5
AUTO-DRIVE
SPV-42

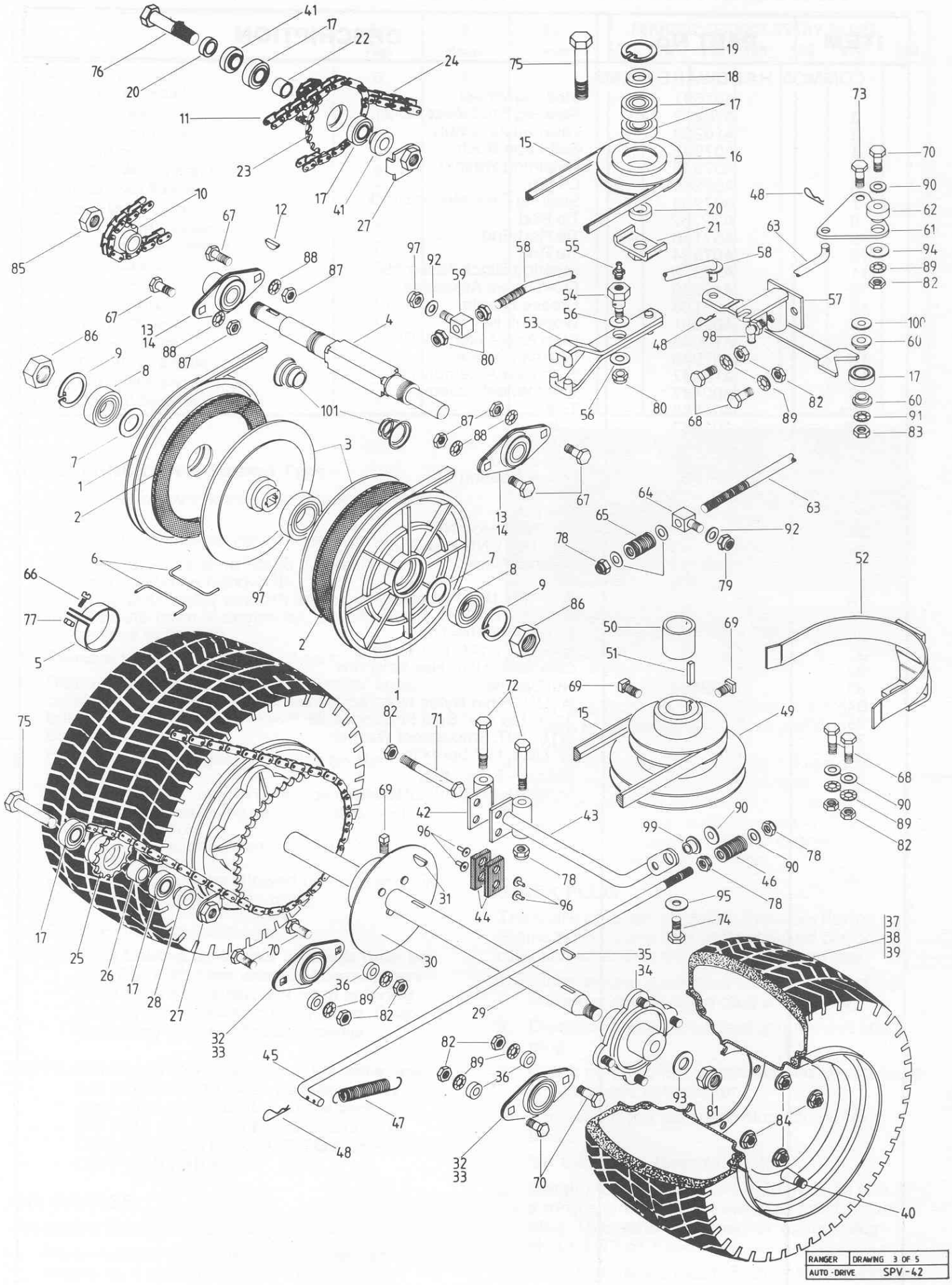
RANGER AUTO – DRIVE SPARE PARTS LIST

ITEM	PART No.	DESCRIPTION
* COMMON HARDWARE ITEM		
1	A10260	Chassis Assembly
2	A10041	Height Selector Shaft Assembly
3	A10280	Cutterhead Engage. Selector Assembly
4	A10248	Drive Selector Pedal Assembly
5	A00980	Cutterhead Selector Arm Assembly
6	A10250	Pedal Arm Assembly
7	A10243	Pedal Assembly
8	A10276	Front Bumper Bar Assembly
9	A10265	Engagement Shaft Assembly
10	A10273	Push Rod Assembly
11	A10277	Engagement Rod Assembly
12	A10057	Cutterhead Engage. Arm Assembly
13	A06318	Selector Lever
14	A07652	Lever Knob
15	A06316	Cutterhead Lifting Rod
16	A07616	Park Brake Rod
17	A07617	Knob
18	A07615	Pedal Rubber
19	A01275	Nylon Bush
20	A07657	End Cap
21	A07971	End Cap
22	A12047	Spacer
23	A12284	Decal – Floor Panel
24	A05417	Decal – Forward-Reverse
25	A07649	Rubber Washer
26	A12234	Swivel Block
27	A12263	Spring Guide
28	A12264	Spring
29	A04006	Pin
30	A01080	Spring Clip
31	A07755	Swivel Block
32	A10178	Rear Support Assembly
33	A07745	Spring
34	A07736	Front Arm
35	A07750	Retaining Washer
36	A07751	Spacer
37	A07897	Sleeve
38	*	Poprivet – 73AS 5-5
39	*	Rollpin – ⅛“ x ⅞”
40	*	Rollpin ¼” x 1⅛”
41	*	Split Pin – ⅛” x ¼”
42	*	Setscrew – 5/16” x 2” UNC. Hex
43	*	Bolt – 5/16” x ⅝” UNC. Washer Face
44	*	Setscrew – ⅜” x 1¼” UNF. Hex
45	*	Setscrew – ⅜” x 1” UNC. Hex
46	*	Bolt – ⅜” x ½” UNC. Hex
47	*	Setscrew – ⅜” x 2” UNC. Hex
48	*	Bolt – ⅜” x 1¾” UNF. HT. Hex
49	*	Nut – 5/16” UNC. Hex
50	*	Nut – ⅜” UNC. Hex
51	*	Nut – ⅜” UNF. Hex
52	*	Nyloc Nut – 5/16” UNC.
53	*	Nyloc Nut – ⅜” UNC. Thin
54	*	Nyloc Nut – ⅜” UNF. Thin
55	*	Nyloc Nut – M12 x 1.75P
56	*	Washer – 5/16” x ⅞” x 16G Flat
57	*	Washer – 5/16” Internal Shakeproof
58	*	Washer – ⅜” x ¾” x 16G Flat
59	*	Washer – ⅜” Internal Shakeproof
60	*	Washer – 12
61	*	Washer ⅝” x 1” x 16G Flat
62	A12102	Drive Selector Pedal Rubber
63	*	Setscrew – 5/16” x 1½” UNF. H.T.
64	*	Nyloc Nut – 5/16” UNF.
65	A04034	Cotter Pin
66	*	Roll Pin – 5/32” x 1¼”


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
18A
18B
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
RANGER
AUTO-DRIVE
DRAWING 2 of 5
SPV-42

RANGER AUTO – DRIVE SPARE PARTS LIST

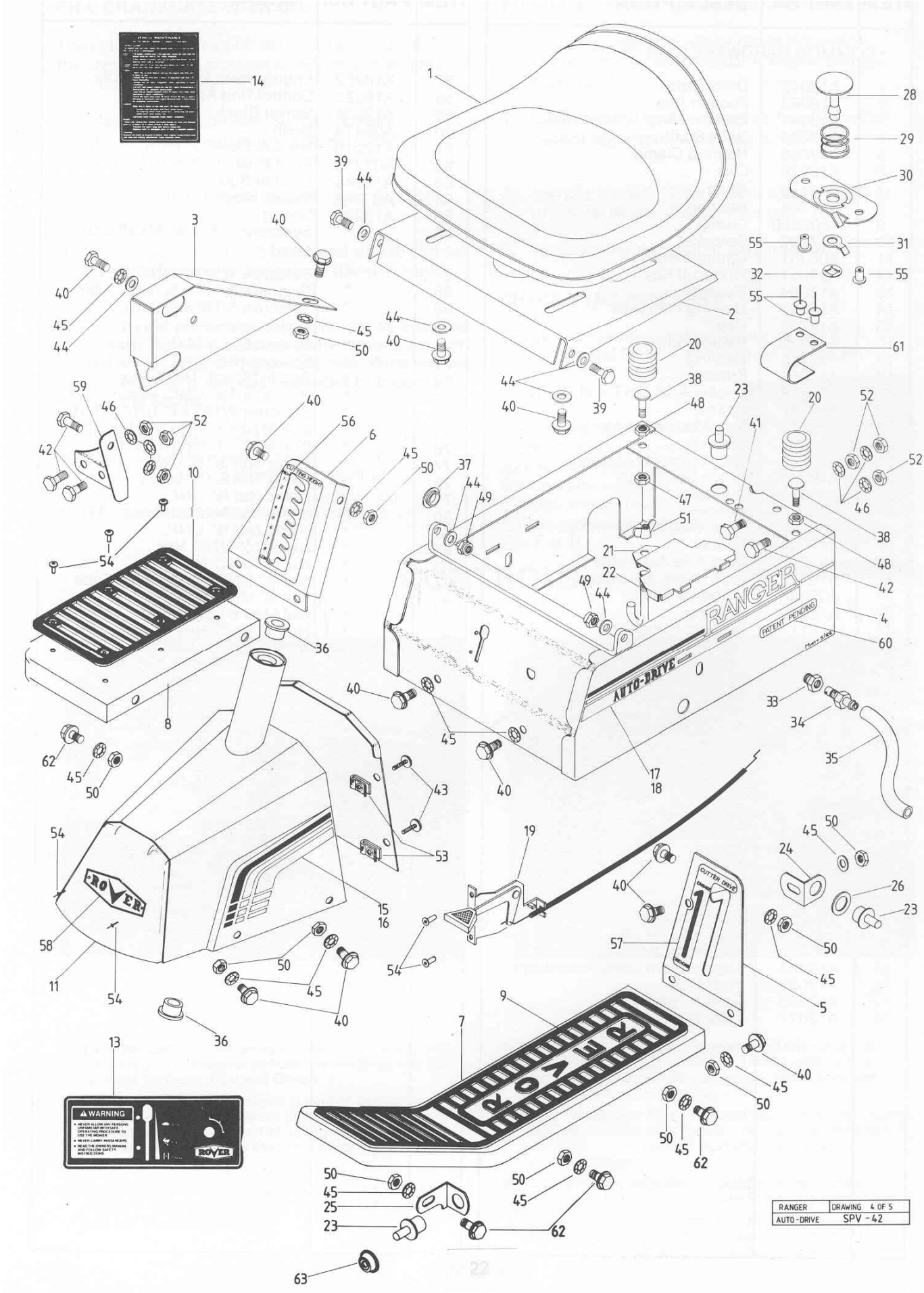
ITEM	PART No.	DESCRIPTION
* COMMON HARDWARE ITEM		
1	A07691	Steering Wheel
2	A10212	Steering Shaft Assembly
3	A10269	Layshaft Assembly
4	A07092	Self-Lube Bush
5	A07948	Retaining Washer
6	A02289	Circlip
7	A07953	Steering Gear Mount Block
8	A12282	Tie Rod
9	A07150	Tie Rod End
10	A07634	Tie Rod
11	A10270	Steering Block Assembly
12	A10225	Front Beam Assembly
13	A07198	Grease Nipple
14	A02051	Woodruff key
15	A10048	Stub Axle Assembly RH.
16	A07949	Layshaft Spacer
17	A10047	Stub Axle Assembly LH.
18	A00447	Front Wheel Assembly
18a	A01585	Tyre
18b	A01687	Tube
19	A07160	Male Hub
20	A07161	Female Hub
21	A01891	Wheel Bearing
22	A10807	Spacer
23	A04004	Roll Pin
24	*	⅝" UNF Nyloc Nut
25	*	⅜" X 1½" UNC Hex Bolt
26	A02103	Ratchet Plate
27	A04006	Pin
28	*	⅜" x ¾" x 16G Flat Washer
29	*	⅝" x 1½" UNF HT. Hex Bolt
30	*	5/16" UNC Hex Nut
31	*	¾" x 1½" x 14G Flat Washer
32	*	5/16" x ¾" UNC Hex Setscrew
33	A02533	Nut Special
34	*	⅜" UNC Thin Nyloc Nut
35	*	3/32" Dia x ½" Split Pin
36	*	5/16" INT. Shakeproof Washer
37	*	⅛" Dia x 1¼" Split Pin
38	*	Washer – 5/16" Flat
39	*	Nyloc Nut – 5/16" UNC Hex.


RANGER | DRAWING 3 OF 5
AUTO-DRIVE | SPV-42

RANGER AUTO – DRIVE SPARE PARTS LIST

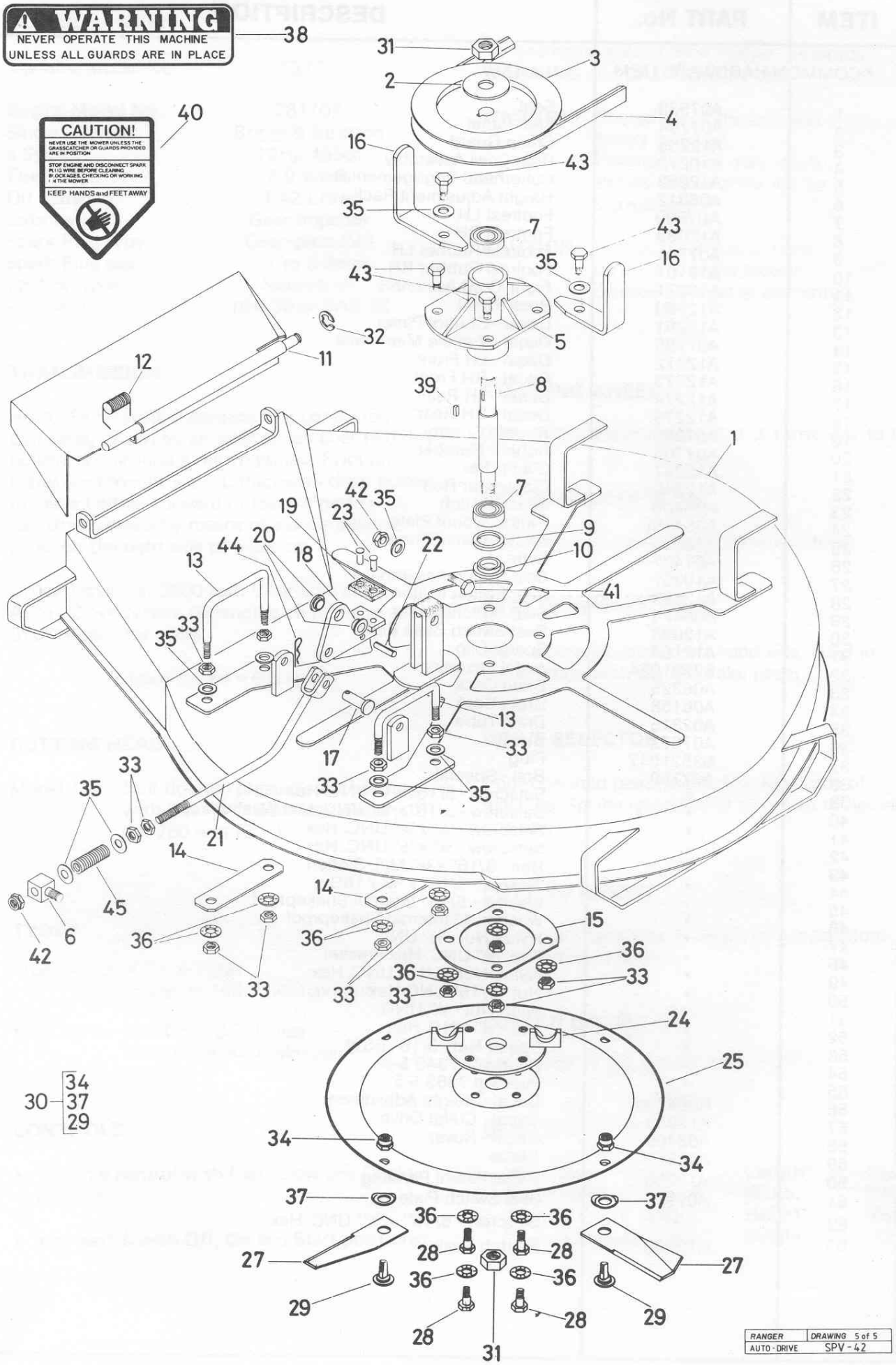
ITEM	PART No.	DESCRIPTION
*COMMON HARDWARE ITEM		
1	A12042	Drive Plate
2	A12063	Friction Disc
3	A12041	Friction Plate
4	A12037	Drive Shaft
5	A12088	Bearing Clamp
6	A12276	Clip
7	A12110	Shim
8	A07744	Bearing
9	1502520	Circlip
10	A12209	Sprocket
11	A06351	Chain-Primary
12	A02051	Woodruff Key
13	A12064	Bearing
14	A12112	Bearing Flangette
15	A12202	Belt
16	A12281	Return Pulley
17	A02476	Bearing
18	A12057	Spacer
19	A08618	Circlip
20	A12242	Spacer
21	A10249	Tab Washer Assembly
22	A12217	Spacer
23	A10275	Idler Sprocket Assembly
24	A12210	Chain Secondary
25	A06349	Sprocket
26	A08570	Spacer
27	A10268	Lock Washer Assembly
28	A12244	Spacer
29	A10242	Rear Axle Assembly
30	A10252	Disc Brake Assembly
31	A05086	Woodruff Key
32	A12065	Bearing
33	A12111	Bearing Flangette
34	A12048	Wheel Hub
35	A12097	Woodruff key
36	A02520	Spacer
37	A07535	Tyre
38	A10266	Rear Wheel Assembly
39	A10246	Rear Rim Assembly
40	A07723	Valve Stem
41	A12203	Spacer
42	A10253	Brake Caliper Assembly
43	A10245	Brake Arm Assembly
44	A06124	Brake Pad
45	A12265	Brake Rod
46	A12093	Spring
47	A03006	Spring
48	A01080	R-Clip
49	A12201	Engine Pulley
50	A12022	Spacer-Pulley
51	A01493	Key
52	A10279	Belt Guard Assembly
53	A10264	Engagement Lever Assembly
54	A12083	Pivot Bolt
55	A07198	Grease Nipple
56	A12077	Fibre Washer

ITEM	PART No.	DESCRIPTION
57	A10262	Engagement Pivot Assembly
58	A10281	Control Rod Assembly
59	A12234	Swivel Block
60	A02474	Bush
61	A12216	Neutral Plate
62	A07715	Pivot Bush
63	A12246	Neutral Rod
64	A07755	Swivel Block
65	A12229	Spring
66	*	Setscrew 3/16" x ½" RH. Phillips Head
67	*	Setscrew ¼" x ⅝" UNC. Hex
68	*	Setscrew 5/16" x ¾" UNC. Hex
69	*	Setscrew 5/16" x ¾" UNC. Sq. Head
70	*	Bolt 5/16" x 1¼" UNC. Hex
71	*	Setscrew 5/16" x 2" UNC. Hex
72	*	Bolt 5/16" x 3" UNC. Hex
73	*	Bolt ⅜" x 1¼" UNC. Hex
74	*	Setscrew 7/16" x 1" UNF. HT. Hex
75	*	Bolt M12 x 1.75P x 55 Hex
76	*	Bolt M12 x 1.75p x 100 Hex
77	*	Nyloc Nut 3/16" UNC.
78	*	Nyloc Nut 5/16" UNC.
79	*	Nyloc Nut ⅜" UNC.
80	*	Nyloc Nut M12 x 1.75P
81	*	Nyloc Nut ⅝" UNP.
82	*	Nut 5/16" UNC. Hex
83	*	Nut ⅜" UNC. Hex
84	*	Nut ⅜" UNC. Hex Washer Face
85	*	Nut ⅝" UNF. Hex
86	*	Nut M20 x 1.5P Hex
87	*	Nut ¼" UNC. Hex
88	*	Washer ¼" Shakeproof
89	*	Washer 5/16" Shakeproof
90	*	Washer 5/16" Flat
91	*	Washer ⅜" Shakeproof
92	*	Washer ⅜" Flat
93	*	Washer ⅝" Flat
94	A07763	Washer Special
95	A07286	Washer Special
96	*	Poprivet SB 6-5 Blind
97	A12043	Bearing
98	A12271	Grease Nipple
99	A03126	Pivot Bush
100	*	Washer 5/16" x & ⅞" x 18g Flat
101	A12116	Spring


RANGER
PATENT PENDING
AUTO-DRIVE
ROVER
CUTTING HEIGHT
CUTTER DRIVE
⚠ WARNING
RANGER | DRAWING 4 OF 5
AUTO-DRIVE | SPV - 42

RANGER AUTO – DRIVE SPARE PARTS LIST

ITEM	PART No.	DESCRIPTION
	* COMMON HARDWARE ITEM	
1	A07539	Seat
2	A07704	Seat Panel
3	A12255	Chain Guard
4	A10272	Rear Cowl Assembly
5	A12252	Cutterhead Engagement Rack
6	A06312	Height Adjustment Rack
7	A07699	Footrest LH
8	A12089	Footrest RH
9	A07701	Footrest Rubber LH
10	A12101	Footrest Rubber RH
11	A10271	Front Cowl Assembly
12	A12260	Back Panel
13	A12261	Decal – Control Panel
14	A07785	Decal – Vehicle Maintenance
15	A12272	Decal – LH Front
16	A12273	Decal – RH Front
17	A12274	Decal – LH Rear
18	A12275	Decal – RH Rear
19	A07985	Throttle Control
20	A07705	Rubber Bumper
21	A12247	Clamp Bar
22	A12249	Clamp Bar Rod
23	A06406	Safety Switch
24	A05419	Switch Mount Plate
25	A12073	Switch Mount Plate
26	A01427	Shim
27	A10257	Seat Switch Assembly
28	A12099	Seat Switch Button
29	A05424	Seat Switch Spring
30	A12098	Seat Switch Base Plate
31	A12104	Spade Clip
32	S2501054	Avdel Fastener
33	A06225	Drain Cock
34	A06158	Drain Cock
35	A02315	Drain Tube
36	A07675	Bush
37	S3521047	Plug
38	A07769	Bolt – Special
39	*	Setscrew – 5/16” x 1” UNC. Hex
40	*	Setscrew – 5/16” x ⅝” UNC. Hex Washerface
41	*	Setscrew – ¼” x ¾” UNC. Hex
42	*	Setscrew – ¼” x ½” UNC. Hex
43	*	Bolt – 3/16” x ¾” M/T. Slotted
44	*	Washer – 5/16” ⅝” x 18G
45	*	Washer – 5/16” Internal Shakeproof
46	*	Washer ¼” Internal Shakeproof
47	*	Nyloc Nut - ⅜” UNC.
48	*	Nut – ⅜” UNC. Hex Presset
49	*	Nyloc Nut – 5/16” UNC. Hex
50	*	Nut – 5/16” UNC Hex
51	*	Wing Nut – ¼” UNC
52	*	Nut – ¼” UNC. Hex
53	*	Speed Nut – 3/16” BSW
54	*	Poprivet – 73AS 5-5
55	*	Poprivet – 73SS 5-5
56	A06479	Decal – Height Adjustment
57	A12253	Decal – Cutter Drive
58	A03409	Decal – Rover
59	A12279	Brace
60	A12280	Decal Patent Pending
61	A07902	Seat Switch Plate
62	*	Setscrew – 5/16” x ¾” UNC. Hex
63	A12289	Switch Seal



RANGER	DRAWING 5 of 5
AUTO-DRIVE	SPV-42

RANGER AUTO – DRIVE SPARE PARTS LIST

ITEM	PART No.	DESCRIPTION
* COMMON HARDWARE ITEM		
1	A10222	Cutterhead Assembly
2	A07195	Spindle Washer
3	A07993	Pulley
4	A12268	V-Belt
5	A07730	Spindle Housing
6	A07755	Swivel Block
7	A07744	Bearing
8	A06359	Cutterhead Spindle
9	A01374	Felt Washer
10	A02304	Spacer Boss
11	A00987	Cutterhead Chute Assembly
12	A07752	Spring Cutterhead Chute
13	A07732	U-Bolt Cutterhead
14	A07733	Washer Plate
15	A07746	Back Plate
16	A07991	C/H Pulley Belt Guide
17	A04006	Pin
18	A10267	Brake Plate Assembly
19	A06124	Brake Pad
20	A02474	Bushes
21	A10221	Brake Rod Assembly
22	A02018	Roll Pin
23	A02227	Brake Pad Rivets
24	A00999	Disc Boss Assembly
25	A00992	Disc Assembly
26		
27	A07873	Blade
28	*	⅜" x 1" UNF HT. Hex S/S
29	—	Available in Kit A00673 Item 30
30	A00673	B.N.W. Set
31	*	¾" UNF Hex Nut
32	A02282	E Retainer
33	*	⅜" UNC Hex Nut
34	—	Available in Kit A00673 Item 30
35	*	⅜" x ¾" x 16G Flat Washer
36	*	⅜" INT. Shakeproof Washer
37	—	Available in Kit A00673 Item 30
38	A12106	Warning Label
39	A07597	Key
40	A02571	Warning Label
41	*	⅜" x 1¼" UNC Hex Bolt
42	*	⅜" UNC Thin Nyloc Nut
43	*	⅜" x 1¼" UNC Hex Setscrew
44	A01080	Spring Pin
45	A07989	Spring-Cutterhead Brake Rod

Warranty Conditions:
Australia Only

Rover-Scott Bonnar Limited warrant that this machine is free from defects in material and workmanship. This warranty is limited to making good or replacing any part which appears upon inspection by the manufacturer or his agent to be defective in material or workmanship.

The engine used to power this machine is warranted by the manufacturer whose warranty statement has been included with the machine. As the warranty for the engine may differ from the warranty for the other components, you are advised to read the engine manufacturer's warranty carefully.

For other items this warranty shall apply for a period of 12 months from date of purchase except for products used commercially where the warranty is limited to 90 days.

This warranty does not obligate the manufacturer, his agents or dealers to bear the transport costs incurred in the repair or replacement of any defective part.

This warranty excludes fair wear and tear, or any damage caused by misuse or abuse. Parts such as blades, blade bolts, v-belts and spark plugs, which can be subjected to use beyond their normal intended working capacity, are also excluded.

This warranty is void if parts other than genuine have been used or if repairs or alterations have been made without the manufacturer's written authority.

The above warranty does not exclude any condition or warranty implied by the Trade Practices Act 1974 or any other relevant legislation which implies any condition which cannot be excluded.

REMEMBER:
PROOF OF PURCHASE IS THE RESPONSIBILITY OF THE OWNER AND IS NECESSARY PRIOR TO WARRANTY WORK BEING UNDERTAKEN. REPAIRS MUST BE CARRIED OUT BY AN AUTHORISED DEALER AND GENUINE SPARE PARTS MUST BE USED OR YOUR WARRANTY WILL BE VOID.

For your record:

Dealer.....

Date of Purchase.....

Model.....

Serial No.....

Rover-Scott Bonnar Limited reserves the right to make changes of and add improvements upon its product at any time without notice or obligation. The Company also reserves the right to discontinue manufacture of any product at its discretion at any time.

Head Office and Factory
Rover-Scott Bonnar Limited
155 Fison Ave., Eagle Farm,
Brisbane, Qld. 4007
Ph: (07) 868 0222
Telex: AA41930
Fax: (07) 868 1010

Queensland/N.T.
155 Fison Ave.,
Eagle Farm,
Brisbane, 4007.
Ph: (07) 868 0255
Telex: AA41930
Fax: (07) 868 1010

New South Wales
11 Cooper Street,
Smithfield,
Sydney, 2164.
Ph: (02) 725 1877
Fax: (02) 609 5710

Victoria/Tasmania
28 Treforest Drive,
Clayton,
Melbourne, 3168
Ph: (03) 565 6500
Fax: (03) 543 8675

South Australia
377 Cross Road,
Edwardstown,
Adelaide, 5039
Ph: (08) 371 0100
Fax: (08) 297 8404

Western Australia
104 Belgravia Street,
Belmont,
Perth, 6104
Ph (09) 277 1288
Fax: (09) 478 1769

New Zealand

Auckland
Rover Mowers Limited
122 Stoddard Road
Mt.Roskill, Auckland 4.
Ph: (09) 694 701
(09) 699 625
Fax: (09) 695 239
Telex: NZ60509